1. A magnetic write head, having an air bearing surface, comprising:

upper and lower magnetic poles each having a first surface, said first surfaces being parallel and non-opposing;

extending for an amount in a direction normal to said first surfaces, one pedestal from each pole, said pedestals having second surfaces that are coplanar, parallel to, and opposed to, said first surfaces;

said pedestals being separated from one another by a non-magnetic layer whereby a write gap is defined;

said pedestals having a common width that defines a track width;

each pedestal extending away from said write gap for a distance whereby most of said pole is set back some distance from said air bearing surface and therefore has little magnetic interaction therewith.

2. The write head described in claim 1 wherein said track width is between about 0.05 and 1 micron.

3. The write head described in claim 1 wherein said amount that said pedestals extend away from said poles is between about 0.1 and 1 micron.

4. A magnetic write head, comprising:

on a substrate, a first layer of high magnetic permeability material that serves as a

primary lower magnetic pole;

an non-magnetic layer that abuts, and extends away from, said primary pole on a first side;

a second layer of high magnetic permeability material that serves as a secondary lower pole and covers said primary pole extending over said non-magnetic layer on said first side as a ledge having a width;

a field coil over, and insulated from, said lower poles;

an upper magnetic pole that overlies said field coil, contacts said lower pole at a second side that opposes said first side, and that is separated from said ledge by a layer of non-magnetic material that is a write gap, said upper pole having, at the write gap, a width equal to said ledge width, whereby it defines a track width; and

said ledge extending away from said primary lower pole by an amount.

5. The write head described in claim 4 wherein said first layer of high magnetic permeability material is NiFe, CoNiFe, FeTaN, FeAlN, CoTaN, CoAlN, or CoFeN and has a thickness between about 0.3 and 3 microns.

6. The write head described in claim 4 wherein said non-magnetic layer is silicon oxide, aluminum oxide, tantalum oxide, Al, Rh, Ru, Cu, NiCu, or Ta.

7. The write head described in claim 4 wherein said second layer of high magnetic

permeability material is NiFe, CoNiFe, FeTaN, FeAlN, CoTaN, CoAlN, or CoFeN and has a thickness between about 0.2 and 2 microns.

8. The write head described in claim 4 wherein said upper magnetic pole is NiFe, CoNiFe, FeTaN, FeAlN, CoTaN, CoAlN, or CoFeN and has a thickness between about 0.3 and 3 microns.

9. The write head described in claim 4 wherein said width is between about 0.05 and 1 microns.

10. The write head described in claim 4 wherein said amount that said ledge extends away from said primary lower pole is between about 0.1 and 1 microns.

11. A stitched pole magnetic write head, comprising:

on a substrate, a first layer of high magnetic permeability material that serves as a primary lower magnetic pole;

an insulating layer that abuts, and extends away from, said primary pole on a first side;

a second layer of high magnetic permeability material that serves as a secondary lower pole and covers said primary pole, extending over said insulating layer on said first side as a ledge having a width and a length;

a depression in said lower pole that determines the value of said length;

a field coil over, and insulated from, said lower pole;

an upper magnetic pole that overlies said field coil and that contacts said lower pole at a second side that opposes said first side;

a flux concentrating pole, that contacts said upper pole and extends downwards therefrom above said ledge and that is separated from said ledge by a layer of non-magnetic material, whereby it forms a write gap, said flux concentrating pole having a width, at the write gap, equal to said ledge width, whereby it defines a track width; and

said ledge extending beyond said primary lower pole by an amount.

12. The stitched pole magnetic head described in claim 11 wherein the width of said ledge is between about 0.05 and 1 microns.

13. The stitched pole magnetic head described in claim 11 wherein the length of said ledge is between about 0.1 and 1 microns.

14. The stitched pole magnetic head described in claim 11 wherein said depression has a depth that is between about 0.1 and 1 Angstroms.

15. The stitched pole magnetic head described in claim 11 wherein the amount said ledge extends beyond said primary lower pole is between about 0.1 and 1 microns.

16. A magnetic write head, comprising:

on a substrate, a flat primary lower magnetic pole having a first length and first and second ends;

at a separation distance over said lower magnetic pole, a flat upper magnetic pole having a second length that is greater then said first length whereby said upper pole has an end, that has a width, that projects beyond said lower pole only at said first end;

said upper pole being magnetically connected to said lower pole at said second end;

between said upper and lower poles, a field coil that is insulated from both said poles;

a secondary lower pole having first and second parts;

said first part extending upwards from said primary lower pole's first end to a first height;

said second part extending laterally from said first part so as to be in alignment with said upper pole end;

said second part also extending upwards to a second height above said lower pole that is greater than said first height; and

said second part being separated from said upper pole by a layer of non-magnetic material, whereby it forms a write gap, said second pole having a width, at the write gap, equal to said upper pole width, whereby it defines a track width.

17. The magnetic write head described in claim 16 wherein the first length of said primary magnetic pole is between about 5 and 25 microns.

18. The magnetic write head described in claim 16 wherein the separation distance over said lower magnetic pole is between about 0.05 and 0.2 microns.

19. The magnetic write head described in claim 16 wherein the width of said upper pole end is between about 1.5 and 3 times said track width.

20. The magnetic write head described in claim 16 wherein said first height is between about 0.1 and 0.5 microns.

21. The magnetic write head described in claim 16 wherein said second height is between about 0.1 and 1 microns.

22. A magnetic write head, comprising:

on a substrate, a primary lower magnetic pole having a first thickness, an upper surface, and first and second ends;

part of said primary lower pole having the form of a shelf that extends outwards away from said first end by an amount, while sharing said upper surface, and having a thickness less than said first thickness;

a secondary lower pole, having a width, that extends upwards from said shelf, to a height, and inwards from said third end by an amount;

a field coil over, and insulated from, said lower poles; and

an upper magnetic pole that overlies said field coil, contacts said primary lower pole near said second end, and that is separated from said secondary lower pole by a layer of non-magnetic material, whereby it forms a write gap, said upper pole having a width, at the write gap, equal to said secondary lower pole width, whereby it defines a track width.

23. The magnetic read head described in claim 22 wherein the thickness of said primary lower magnetic pole is between about 0.5 and 3 microns.

24. The magnetic read head described in claim 22 wherein the thickness of said shelf is between about 0.2 and 2 microns.

25. The magnetic read head described in claim 22 wherein the amount that said shelf extends outwards is between about 0.1 and 2 microns.

26. The magnetic read head described in claim 22 wherein the width of said secondary lower pole is between about 0.05 and 1 microns.

27. The magnetic read head described in claim 22 wherein the height that said

secondary lower pole extends upwards from said shelf is between about 0.2 and 2 microns.

28. The magnetic read head described in claim 22 wherein the amount that said secondary lower pole extends inwards from said third end is between about 0.05 and 0.2 microns.

29. A process to manufacture a magnetic write head, comprising:

on a substrate, depositing and then patterning a first layer of high magnetic permeability material to form a primary lower magnetic pole;

depositing a layer of insulating material on said substrate and on said primary lower pole to a thickness greater than that of said primary lower pole to form a structure;

planarizing the structure until all insulating material has been removed from over said primary lower pole, whereby said insulating layer abuts, and extends away from, said primary pole on one side;

depositing and patterning a second layer of high magnetic permeability material to form a secondary lower pole that covers said primary pole and extends over said insulating layer on said one side as a ledge having a width;

forming a field coil over, and insulated from, said secondary lower pole;

forming an upper magnetic pole that overlies said field coil, contacts said lower pole at a location well removed from said one side, and that is separated from said ledge by a

layer of non-magnetic material, thereby forming a write gap, said upper pole having a width, at the write gap, equal to said ledge width, thereby defining a track width; and

through planarizing, removing material from said ledge, said write gap, and said upper pole until said ledge extends beyond said primary lower pole by a final amount.

30. The process described in claim 29 further comprising:

forming a stitched pole between said write gap and said upper pole, thereby concentrating magnetic flux from said upper pole at said write gap; and

prior to forming said field coil, etching a trench in said lower pole whereby said shelf presents a reduced area to said upper pole.

31. The process described in claim 29 wherein said first layer of high magnetic permeability material is NiFe, CoNiFe, FeTaN, FeAlN, CoTaN, CoAlN, or CoFeN and has a thickness between about 0.3 and 3 microns.

32. The process described in claim 29 wherein said insulating layer is silicon oxide, aluminum oxide, tantalum oxide, Al, Rh, Ru, Cu, NiCu, or Ta and is deposited to a thickness between about 1 and 2.5 microns.

33. The process described in claim 29 wherein said second layer of high magnetic permeability material is NiFe, CoNiFe, FeTaN, FeAlN, CoTaN, CoAlN, or CoFeN and has

a thickness between about 0.2 and 2 microns.

34. The process described in claim 29 wherein said upper magnetic pole is NiFe, CoNiFe, FeTaN, FeAlN, CoTaN, CoAlN, or CoFeN and has a thickness between about 0.2 and 2 microns.

35. The process described in claim 29 wherein said upper pole width at the write gap is between about 0.05 and 1 microns.

36. The process described in claim 29 wherein the final amount that said ledge extends away from said primary lower pole is between about 0.1 and 1 microns.